Associate Professor in Formal Methods

Job description

A full-time associate professor position is available in formal methods at the Department of Informatics, research group for reliable systems (PSY). The department seeks a researcher with a strong track record, educational and administrative skills, and abilities to establish and lead research projects, who will strengthen our research and education in formal methods.

The research group in formal methods at the Department of Informatics focuses on developing practical formal modeling languages and analysis methods that can be applied to large and complex state-of-the-art systems. In particular, the group emphasizes executable formal modeling and tool-based analysis methods, and has developed active object modeling languages such as ABS, and the rewriting-logic-based Real-Time Maude language. Activities of the group also include program verification and semantics, and integrated and interdisciplinary formal methods such as formal methods for, e.g., security and privacy, robotics, digital twins, IoT and AI.

The group is quite international, with staff and PhD students from all around the world, and is actively involved in and leading European projects and organizing international scientific conferences and workshops.

The successful applicant must be able to teach at all levels and to supervise Master and PhD students.

The successful applicant may furthermore be required to take on other teaching duties and administrative tasks, by request from the Department or the Faculty of Mathematics and Natural Sciences.

Specific information about the position

The candidate must have a PhD in formal methods or a closely related field. The candidate must have actively conducted research in formal methods after the reception of the doctorate, and have a publication record in top-tier formal methods conferences and journals. The candidate must further document scientific achievements, experience in education and research leadership, and the ability to obtain competitive research funding.

Pedagogical qualifications, teaching experience and supervision experience at the Master and PhD level are important factors in the evaluation of the candidate.

Qualification requirements

Primary assessment criteria will be as follows:

- To qualify for appointment the candidate must hold a PhD in formal methods or a closely related field.
- The candidate must have a record of publication in top-tier formal methods conferences and journals. Scientific qualifications within formal methods will play a major role, and the main emphasis will be on the candidate’s scientific production the last five years.
- Candidates must also be able to establish, lead, conduct and collaborate in research projects. A track record in academic leadership is an advantage, as well as experience in the acquisition of competitive research grants.
- The research of the candidate should be compatible with and complement the formal methods research group.
- International network, outreach activities, collegiality, and the ability to create a good working environment will be part of the evaluation.
- Pedagogical qualifications and teaching and supervision experience at all levels will be an important factor in the evaluation process and should be well documented in a teaching portfolio. The applicant should describe her/his qualifications in view of the Scholarship of Teaching and Learning (SoTL) framework which includes:
  - Focus on student learning
  - A clear development over time
  - A researching approach
  - A collegial attitude and practice
- Candidates should have teaching experience in formal methods courses, such as the course portfolio of the research group, and have a commitment to engage in undergraduate and graduate computer science education and in mentoring and advising master and doctoral students.
- The person appointed must have fluent oral and written communication skills in English.

The successful candidate who at the time of appointment cannot document sufficient teaching qualifications (minimum formal requirement is a 200 hrs pedagogical programme) will be required to obtain such qualifications within a two-year period.

The successful candidate must demonstrate mastery of both English and one of the Scandinavian languages as working languages. If an appointee is not fluent in a Scandinavian language, the appointee will be required to learn sufficient Norwegian within a two-year period, to be able to participate actively in all functions the position may involve.

Personal skills

- Ability to create an attractive, inclusive and competitive research environment
- Networking skills, ability to collaborate and conduct scientific leadership
- Ability to cooperate and communicate well with other members of the staff
We offer
- Salary from NOK 702 100 - 873 400 depending on competencies, in the position of Associate Professor (position code 1011)
- A professionally stimulating working environment
- Attractive welfare benefits and a generous pension agreement, in addition to Oslo’s family-friendly environment with its rich opportunities for culture and outdoor activities
- The opportunity to apply for promotion to full professorship at a later stage

How to apply
The application must include:

- Application letter
- A research position paper (1-4 pages) describing the applicant’s vision and ambitions for the nearest future
- A detailed CV, including complete list of education, positions, pedagogical experience, administrative experience, project acquisition and coordination experience, funding and awards, and other qualifying activities
- Copies of educational certificates, PhD diploma, transcript of records and letters of recommendation
- A complete list of publications and academic merits and awards (if not included in the CV)
- Full text of up to 10 selected publications the applicant wishes to include in the evaluation
- A document discussing the importance, interrelation, and relevance of the selected papers for this position
- Description of dissemination activities beyond scientific publications
- Educational portfolio of 3-6 pages documenting educational competence and experience, including a reflection note in which your own teaching practice and view of learning is anchored in the SoTL framework. The teaching portfolio is expected to include:
  - Listing of teaching experience as well as work on developing/ revising/ renewing study plans and the design of courses
  - Documentation of teaching qualifications and supervision of Master and PhD students
- List of 3 reference persons (name, relation to candidate, e-mail and phone number)

Application with attachments must be submitted via our online recruitment system. Please note that all documentation must be in English or a Scandinavian language.

The successful candidate should have an international profile with respect to the above criteria. The candidate for this position will be selected based on excellence and fit with the section’s research profile.

Relevant candidates will be called for interviews and requested to hold a trial teaching session. References may be consulted.

Formal regulations
As a general rule an interview will be used in the appointment process, usually supplemented with a trial teaching session. The basis for assessment will be the scientific production of the applicant, the teaching portfolio, pedagogical and educational qualifications, the applicant’s qualifications within leadership and administration, other qualifications as well as general personal suitability for the position. In ranking the competent applicants, the full range of qualifications will be considered and explicitly assessed.

Please refer to the Rules for Appointments to Professorships and Associate Professorships at the University of Oslo, the Guide for Applicants and Members of the Assessment Committee and Rules for practicing the requirement for basic pedagogical competence at the University of Oslo.

Pursuant to section 25(2) of the Freedom of Information Act, information concerning the applicant may be made public, even if the applicant has requested not to appear on the list of applicants.

The University of Oslo has a transfer agreement with all employees that is intended to secure the rights to all research results etc.

The University of Oslo has a personnel policy objective of achieving a balanced gender composition and to recruit people with an immigrant background.

In addition, the University of Oslo aims for its employees to reflect the diversity of the population to the greatest degree possible. We therefore encourage qualified applicants with disabilities or gaps in their CV to apply for the position. The University of Oslo will adapt the workplace to suit employees with disabilities. Applicants who indicate that they have disabilities or gaps in their CV are made aware that this information may be used for statistical purposes.

Contact information
Prof. Einar Broch Johnsen, phone: +47 22852509, e-mail: einarj@ifi.uio.no.

For technical questions about the recruitment system, HR Adviser Torunn Standal Guttormsen, email: t.s.guttormsen@mn.uio.no, tel. +47 22 85 42 72

About the University of Oslo
The University of Oslo is Norway's oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

The Department of Informatics (IFI) is one of nine departments belonging to the Faculty of Mathematics and Natural Sciences. IFI is Norway’s largest university department for general education and research in Computer Science and related topics.
The Department has more than 1800 students on bachelor level, 600 master students, and over 240 PhDs and postdocs. The overall staff of the Department is close to 370 employees, about 280 of these in full time positions. The full time tenured academic staff is 75, mostly Full/Associate Professors.

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